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PATENT APPLICATION

ATTORNEY DOCKET NO. 10002147-1

Inventor(s): Alexander C. Ranous et al.

Confirmation No.: 3052

Application No.: 09/559,693

Examiner: Barbara Burgess

Filing Date: April 27, 2000

Group Art Unit: 2157

Title: INTERNET USAGE DATA RECORDING SYSTEM AND METHOD EMPLOYING DISTRIBUTED DATA  
PROCESSING DATA STORAGE

Mail Stop Amendment  
Commissioner For Patents  
PO Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL LETTER FOR RESPONSE/AMENDMENT

Transmitted herewith is/are the following in the above-identified application:

- ☐ Response/Amendment  
☐ New fee as calculated below  
☐ No additional fee  
☒ Other Response to Non-Compliant Appeal Brief

- ☐ Petition to extend time to respond  
☐ Supplemental Declaration

Fee\$

CLAIMS AS AMENDED BY OTHER THAN A SMALL ENTITY						
(1) FOR	(2) CLAIMS REMAINING AFTER AMENDMENT	(3) NUMBER EXTRA	(4) HIGHEST NUMBER PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEES
TOTAL CLAIMS		MINUS		= 0	X \$50	\$ 0
INDEP. CLAIMS		MINUS		= 0	X \$200	\$ 0
<input type="checkbox"/> FIRST PRESENTATION OF A MULTIPLE DEPENDENT CLAIM					+ \$360	\$ 0
EXTENSION FEE	<input type="checkbox"/> 1st Month \$120	<input type="checkbox"/> 2nd Month \$450	<input type="checkbox"/> 3rd Month \$1020	<input type="checkbox"/> 4th Month \$1590		\$ 0
OTHER FEES						\$
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						\$ 0

Charge \$ 0 to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:  
Commissioner for Patents, Alexandria, VA 22313-1450.

Date of Deposit: February 27, 2006

Typed Name: Steven E. Dicke

Signature: Steven E. Dicke

Respectfully submitted,

Alexander C. Ranous et al.

By Steven E. Dicke

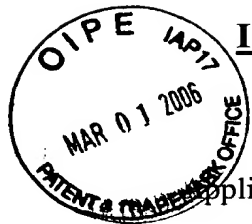
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND**  
**INTERFERENCES**

Applicant:	Alexander C. Ranous et al.	Examiner:	Barbara Burgess
Serial No.:	09/559,693	Group Art Unit:	2157
Filed:	April 27, 2000	Docket:	10002147-1
Title:	INTERNET USAGE DATA RECORDING SYSTEM AND METHOD EMPLOYING DISTRIBUTED DATA PROCESSING DATA STORAGE		

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**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

**Mail Stop Appeal Brief – Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir/Madam:

This Appeal Brief is resubmitted in support of the Notice of Non-Compliant Appeal Brief mailed on January 27, 2006.

Appellant respectfully requests consideration and reversal of the Examiner's rejection of pending claims 1-5, 8-10, 21-27, 29, 36-43.

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Applicant: Alexander C. Ranous et al.

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DATA PROCESSING DATA STORAGE

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**REAL PARTY IN INTEREST**

The real party in interest is Hewlett-Packard Development Company, L.P.

**RELATED APPEALS AND INTERFERENCES**

There are no other prior and pending appeals, interferences or judicial proceedings which may be related to, directly affected by or having a bearing on the Board's decision in this Appeal.

**STATUS OF CLAIMS**

Claims 1-5, 8, 21-27, and 36-43 stand rejected under 35 U.S.C. §103 as being unpatentable over Schweitzer et al. (hereinafter "Schweitzer", US 2002/0091811 A1) in view of Carroll Bullard (hereinafter "Carroll", US 2002/0091636 A1).

Claims 9-10, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schweitzer et al. in view of Carroll and in further view of Dyer et al. (hereinafter "Dyer", 4,361,877).

**STATUS OF AMENDMENTS**

No Amendments to the claims have been filed subsequent to the Final Office Action mailed August 12, 2005.

**SUMMARY OF THE CLAIMED SUBJECT MATTER**

The summary is set forth as an exemplary embodiment as the language corresponding to independent claims 1, 21, 36, and 40. Discussions about elements of claims 1, 21, 36, and 40 can be found at least at the cited locations in the specification and drawings.

The present invention, as claimed in independent claim 1, provides a network usage system (120) having a multiple level distributor data storage system. (e.g., *Specification* at Figs. 1, 5 and 8). The network usage system (120) includes a set of first level network data collectors (122,124,126,128), wherein each first level network data collector (122,124,126,128) receives network accounting data from a network data source (144,146,148,150), processes and stores the network accounting data at the first level network data collector (122,124,126,128), and a second level network data collector (130,132), wherein the second level network data collector (130,132), receives processed network

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accounting data from one or more first level network data collectors (122,124,126,128), processes and stores the network accounting data at the second level network data collector (130,132), and wherein each first level network data collector (122,124,126,128) includes a first level data storage system (162,164,166,168) and the second level network data collector (130,132) includes a second level data storage system (170,172) for storing processed network accounting data, wherein the first level data storage system (162,164,166,168) and the second level data storage system (170,172) each include a process data storage location (250), metadata storage location (252) and an error recovery information storage location (254), wherein the processed network accounting data is stored at the processed data storage location (250). *See Specification*, at page 28, lines 22-31; pages 29, lines 1-1; Figure 5 and Figure 8.

The present invention, as claimed in independent claim 21, provides a method for recording network usage (100) including storing network data in a multiple level data storage system. (e.g., *Specification* at Figs. 4 and 5) The method includes defining a set of first level network data collectors (122,124), receiving a first set of network accounting data (104) at each first level network data collector (122,124,126,128), processing and storing the first network accounting data set (108) at the first level network data collector (122,124,126,128), defining a second level network data collector (110), receiving the first network accounting data set for one or more first level network data collectors (122,124,126,128), processing the first network accounting data set to produce a second network accounting data set (116) and storing the second network accounting data set at the second level network data collector (130,132), defining a first level aging policy for the first level network data collector (122,124,126,128), and removing the first network accounting data set from the first level network data collector (122,124,126,128) to the second level network data collector (130,132) after a time period corresponding to the first level aging policy. *See Specification*, at page 28, lines 11-21; page 29, lines 15-21; Figs. 4 and Figure 5.

The present invention, as claimed in independent claim 36, provides a method for recording network usage (100) including storing network data in a multiple level data storage system. (e.g., *Specification* at Figs. 4, 5 and 6). The method includes defining a set of first level network data collectors (122,124,126,128), receiving a first set of network usage information (104) at each first level network data collector (122,124,126,128), processing and

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storing the first network usage information set (108) at the first level network data collector (122,124,126,128), defining a second level network data collector (130,132), receiving the first network usage information set at the second level network data collector (130,132) from one or more first level network data collectors (122,124,126,128), processing the first network usage information set to produce a second network usage information set, and storing the second network usage information set at the second level network data collector (130,132), and defining the first level network data collector (122,124,126,128) to include a query manager (192), wherein the second level network collector (130,132) is in communication with the first level network data collector (122,124,126,128) via the query manager (192). *See Specification* at page 28, lines 11-31; page 29, lines 1-21; Figs. 4, 5 and 6.

The present invention as claimed in independent claim 40, provides a network usage system (120) having a multiple level distributed data storage system. (e.g., *Specification* Figs. 5, 6 and 8). The system includes a set of first level network data collectors (122,124,126,128), wherein each first level network data collector (122,124,126,128) receives network accounting data from a network data source (144,146,148,150), processes and stores the network accounting data at the first level network data collector (122,124,126,128), where each network data collector (122,124,126,128) is configured to receive network accounting data including at least one of network usage data comprising source address, destination address, byte or packet counts and a time stamp, or network session data comprising a source address, a time stamp and a user name. The system also includes a second level network data collector (130,132), wherein the second level network data collector (130,132) receives processed network accounting data from one or more first level network data collectors (122,124,126,128), processes and stores the network accounting data at the second level network data collector (130,132); wherein each first level network data collector (122,124,126,128) includes a first level data storage system (162,164) and the second level network data collector (130,132) includes a second level data storage system (170,172), for storing processed network accounting data, wherein the first level data storage system (162,164,166,168) and the second level data storage system (170,172) each include a processed data storage location (250), a meta data storage location (252) and an error recovery information storage location (254), wherein the processed network accounting data

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is stored at the process data storage location (250), wherein after storing of the process network accounting data, corresponding meta data is transferred to the meta data storage location (252) and error recovery information is transferred to the error recovery information location (254); wherein each first level network data collector (122,124,126,128) includes a query manager (192), and wherein the second level network data collector (130,132) is in communication with the first level network data collector (122,124,126,128) via the query manager (192); and wherein each of the first level data storage systems (162,164,166,168) include a first level aging policy, wherein network accounting data is removed from the first level data storage system (162,164,166,168) after a time period corresponding to the first level aging policy, and wherein the second level data storage system (170,172) includes a second level aging policy different from the first level aging policy, wherein the network accounting data is removed from the second level data storage system (170,172) after a time period corresponding to the second level aging policy. *See Specification* at page 28, lines 11-21, lines 30-31; page 29, lines 1-21; Figs. 5, 6 and 8.

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**GROUND S OF REJECTION TO BE REVIEWED ON APPEAL**

Claims 1-5, 8, 21-27, and 36-43 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Schweitzer in view of Carroll.

Claims 9-10, and 29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Schweitzer in view of Carroll and further in view of Dyer.

**ARGUMENT**

**The rejection of Claims 1-5, 8-10, 21-27, 29, and 36-43 under 35 U.S.C. §103**

Claims 1-5, 8, 21-27, and 36-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schweitzer in view of Carroll. Claims 9-10, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schweitzer in view of Carroll and further in view of Dyer.

The claims do not stand together or fall together. Instead, Appellants present separate arguments for various independent and dependent claims. Each of these arguments is separately argued below and presented with separate headings and sub-headings as required by 37 C.F.R. §41.37(c)(1)(vii) as follows:

- I. Claims 1-5 and 8-10, with claim 1 selected for discussion
- II. Claims 21-27 and 29, with claim 21 selected for discussion
- III. Claims 36-39, with claim 36 selected for discussion
- IV. Claims 40-43, with claim 40 selected for discussion

**I. Rejection of Claims 1-5, and 8-10 as being unpatentable under 35 U.S.C. §103(a)**

Claims 1-5, and 8 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schweitzer in view of Carroll. Claims 9 and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schweitzer in view of Carroll and further in view of Dyer.

Appellants submit that independent claim 1 is patentable over Schweitzer, either alone or in view of Carroll.

**Applicable Law.**

Referring to 35 U.S.C. § 103(a), a patent may not be obtained though the invention is not identically disclosed or described as set forth in 35 U.S.C. § 102, if the differences



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between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

With regard to 35 U.S.C. § 103, “Patent examiners carry the responsibility of making sure that the standard of patentability enunciated by the Supreme Court and by the Congress is applied in each and every case.” M.P.E.P. 2141 (emphasis in the original). The Examiner bears the burden under 35 U.S.C. § 103 in establishing a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

Three criteria must be satisfied to establish a *prima facie* case of obviousness. First, the Examiner must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would teach, suggest, or motivate one to modify a reference or to combine the teachings of multiple references. *In re Fine* at 1074. Second, the prior art can be modified or combined only so long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375, 379 (Fed. Cir. 1986). Third, the reference or combined references must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (C.C.P.A. 1974).

The court in *Fine* stated:

Obviousness is tested by “what the combined teaching of the references would have suggested to those of ordinary skill in the art.” But it “cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination.” And “teachings of references can be combined *only* if there is some suggestion or incentive to do so.” *In re Fine*, 5 USPQ2d at 1599 (citations omitted).

There must be some teaching somewhere that provides the suggestion or motivation to combine prior art teachings and applies that combination to solve the same or similar problem that it addresses. *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988); *In re Wood*, 599 F.2d 1032, 1037, 202 USPQ 171, 174 (C.C.P.A. 1979). In particular, “The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based upon Appellants' disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142 (emphasis added).

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The test for obviousness under § 103 must take into consideration the invention as a whole; that is, one must consider the particular problem solved by the combination of elements that define the invention. *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985). Furthermore, claims must be interpreted in light of the specification, claim language, other claims, and prosecution history. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1568, 1 USPQ2d 1593, 1597 (Fed. Cir. 1987), *cert. denied*, 481 U.S. 1052 (1987). At the same time, a prior patent cited as a § 103 reference must be considered in its entirety, “*i.e.* as a *whole*, including portions that lead away from the invention.” *Id.* That is, the Examiner must recognize and consider not only the similarities, but also the critical differences between the claimed invention and the prior art as one of the factual inquiries pertinent to any obviousness inquiry under 35 U.S.C. § 103. *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990) (emphasis added). Finally, the Examiner must avoid hindsight. *Id.*

With regard for the test for obviousness under § 103, a statement that modifications of the prior art to meet the claimed invention would have been “ ‘well within the ordinary skill of the art’ at the time the claimed invention was made’ ” because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993); M.P.E.P. § 2143.01 (emphasis in the original).

In conclusion, appellants are entitled to a patent grant if any one of the elements of a *prima facie* case of obviousness is not established. The Federal Circuit has endorsed this view in stating: “If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the appellants are entitled to grant of the patent.” *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1448 (Fed. Cir. 1992).

**Independent claim 1** recites a network usage system having a multiple level distributed data storage system. The system includes a set of first level network data collectors, wherein each first level network data collector receives network accounting data from a network data source, processes and stores the network accounting data at the first level network data collector. A second level network data collector is provided, wherein the second level network data collector receives processed network accounting data from one or

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more first level data collectors, processes and stores the network accounting data at the second level network data collector. Each first level network data collector includes a first level data storage system and the second level network data collector includes a second level data storage system, for storing process network accounting data. The first level data storage system and the second level data storage system each include a processed data storage location, a meta data storage location and an error recovery information storage location, wherein the processed network accounting data is stored at the process data storage location.

**Schweitzer** discloses a system, method and computer program product for merging data in a network-based filtering and aggregating platform. The system includes gatherer devices that gather detailed information from various information source devices and convert the information into standardized information. The gatherer devices can correlate the gathered information with account information for network transaction accounting. Manager devices manage the gatherer devices and store the gathered standardized information. Schweitzer, paragraph 0011.

**Carroll** discloses a system for capturing quality of service. The system includes a data collector layer 18 that is a distributed layer of individual data collectors. The data collectors collect raw accounting information and convert data into normalized records referred to as network accounting records (NARs). Each of the data collectors forwards network accounting records to a flow aggregation process 60. (See paragraph 0037). The flow aggregation process 60 is a central collection point for all network accounting records produced from various data collectors in the data collection layer 18. The flow aggregation processor 60 receives NARs from various data collectors and aggregates, i.e., summarizes related information from the received NARs across the accounting support arrangement 10. The aggregation layer 60 produces summary NARs, i.e., enhanced and unique network accounting records. (See paragraph 0040). The data can be further enhanced and/or reduced (i.e., aggregated) to meet the specific needs of an application or output interface based on the aggregation policy of the flow data processor 60.

As conceded by the Examiner, Schweitzer fails to disclose a network usage system wherein **the first level data storage system and the second level data storage system each include a processed data storage location, a meta data storage location and an error recovery information storage location, wherein the processed network accounting data**

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**is stored at the processed data storage location.** See also, Office Action mailed August 12, 2005.

**Carroll also fails to disclose a network usage system wherein the first level data storage system and the second level data storage system each include a processed data storage location, a meta data storage location and an error recovery information storage location, wherein the processed network accounting data is stored at the processed data storage location.** In contrast, Carroll merely discloses a flow probe which may be deployed between an end system "A" and an end system "B". The flow probe is used to generate an error report. The flow probe can receive an Internet Message Control Protocol (IMCP) message to convey error information back to an originator of a request, such as a device being in a failed state. See Carroll, col. 13, paragraph 0148. Further, in Carroll,

Thus, the payload processing can be viewed as a packet processing exception, an exception that is invoked when it is determined that an ICMP error reporting message has been received. The ICMP message reports an error event and the IP packet associated with that error event.

See Carroll, paragraph [0160] as cited by the Examiner.

See also Carroll, paragraphs [0147] and [0148], "the Internet control message protocol (ICMP) is designed to convey this type of information back to the originator of the request. For example, suppose device 608 is a router that is in a "failed" state.

Such a system as disclosed by Carroll is not a first level data storage system and a second level data storage system where each include...an error recovery information storage location as claimed by Appellants. As such, one skilled in art cannot combine the teachings of Schweitzer in view of Carroll and arrive at the invention of independent claim 1. Appellant requests that the above rejection of independent claim 1 under 35 U.S.C. § 103 be withdrawn.

Dependent claims 2-5 and 8-10 depend either directly or indirectly upon independent claim 1. As such, Appellants believe these dependent claims to also be allowable over the art of record.

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**II. Rejection of Claims 21-27, and 29 as being unpatentable under 35 U.S.C. §103(a)**

Claims 21-27 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schweitzer in view of Carroll. Claim 29 is rejected under 35 U.S.C. §103(a) as being unpatentable over Schweitzer in view of Carroll and further in view of Dyer. Appellants submit that independent claim 21 is patentable over Schweitzer, either alone or in view of the secondary reference Carroll.

**Applicable Law.** The applicable law is recited above in Section I.

**Independent claim 21** recites a method for recording network usage including storing network data in a multiple level data storage system. The method includes defining a set of first level data collectors. A first set of network accounting data is received at each first level network data collector. The first network accounting data set is processed and stored at the first level network data collector. A second level network data collector is defined. The first network accounting data set is received from one or more first level network data collectors. The first network accounting data set is processed to produce a second network accounting data set. The second network accounting data set is stored at the second level network data collector. A first level aging policy is defined for the first level network data collector. The first network accounting data set is removed from the first level network data collector after a time period corresponding to the first level aging policy.

**Schweitzer** is as discussed above in Section I.

**Carroll** is as discussed above in Section I.

In contrast to the Examiner's remarks, Schweitzer fails to disclose **defining a first level aging policy for the first level network data collector, and removing the first network accounting data set from the first level network data collector to the second level network data collector after a time period corresponding to the first level aging policy**. See Office Action mailed August 12, 2005, page 3. In contrast, Schweitzer discloses performing clean-up and aging procedures at central database 175. The central database 175 is not a first level network data collector as claimed by Appellants. Further, in Schweitzer, old data is removed from central database 175 for free new space periodically. See Schweitzer, para. [0084] and [0090]. As such, Schweitzer fails to disclose removing the first network accounting data set from the first level network data collector to the second level network data collector after a time period corresponding to the first level aging policy.

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As such, one skilled in the art could not combine the teachings of Schweitzer, either alone or in view of Carroll, and arrive at the invention of claim 21.

Dependent claims 22-27 and 29 depend either directly upon corresponding independent claim 21. Accordingly, Appellants believe these dependent claims to also be allowable over the art of record.

**III. Rejection of Claims 36-39 as being unpatentable under 35 U.S.C. §103(a)**

Claims 36-39 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schweitzer et al in view of Carroll. Appellants submit that independent claim 36 is patentable over Schweitzer, either alone or in view of the secondary reference Carroll.

**Applicable Law.** The applicable law is recited above in Section I.

**Independent claim 36** recites a method for recording network usage including storing network data in a multiple level data storage system. The method includes defining a set of first level network data collectors. A first set of network usage information is received at each first level network data collector. The first network usage information set is processed and stored at the first level network data collector. A second level network data collector is defined. The first network usage information set is received at the second level network data collector from one or more first level network data collectors. The first network usage information set is processed to produce a second network usage information set. The second network usage information set is stored at the second level network data collector. The first level network data collector is defined to include a query manager, wherein the second level network data collector is in communication with the first level network data collector via the query manager.

**Schweitzer** is as discussed above in Section I.

**Carroll** is as discussed above in Section I.

In reference to the Examiner's remarks, Schweitzer fails to disclose a method for recording network usage including storing network data in a multiple level data storage system, including **defining the first level network data collector to include a query manager, wherein the second level network data collector is in communication with the first level network data collector via the query manager.** See Office Action mailed August 12, 2005, page 3. In Schweitzer, the central event manager (CEM), as referenced by

**Appeal Brief to the Board of Patent Appeals and Interferences**

Applicant: Alexander C. Ranous et al.

Serial No.: 09/559,693

Filed: April 27, 2000

Docket No.: 10002147-1

Title: INTERNET USAGE DATA RECORDING SYSTEM AND METHOD EMPLOYING DISTRIBUTED DATA PROCESSING DATA STORAGE

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the Examiner, operates to control all the gatherers, instructing them to perform, in a particular sequence, the operations defined in the computation flow. See Schweitzer, paragraphs 0080-0089. The CEM 170 is not a first level network data collector as claimed by Appellants, nor is it a first level network data collector that includes a query manager for communication with the second level network data collector as claimed by Appellants. In further contrast, Schweitzer discloses that the Network Service Provider can perform the tasks of **creating and running queries** and reports on network activity and resource consumption **through the User Interface Server (UIS)**, not at a first level data collector. See Schweitzer, paragraph 0095 – 0098. As such, one skilled in the art could not combine the teachings of Schweitzer in view of Carroll and arrive at the invention of independent claim 36. In view of the above, Appellants request that the rejection of independent claim 36 under 35 U.S.C. §103 be withdrawn.

Dependent claims 37-39 depend upon independent claim 36. Accordingly, Appellants believe these dependent claims also to be allowable over the art of record.

**IV. Rejection of Claims 40-43 as being unpatentable under 35 U.S.C. §103(a)**

Claims 40-43 are rejected under 35 U.S.C. §103(a) as being unpatentable over Schweitzer in view of Carroll. Appellants submit that independent claim 40 is patentable over Schweitzer, either alone or in view of the secondary reference Carroll.

**Independent claim 40** recites a network usage system having a multiple level distributed data storage system. The system includes a set of first level network data collectors, wherein each first level network data collector receives network accounting data from a network data source, processes and stores the network accounting data at the first level network data collector. Each network data collector is configured to receive network accounting data including at least one of network usage data comprising the source address, destination address, byte or pack accounts and a time stamp, or network session data comprising a source address, a time stamp and a user name. A second level network data collector is provided, wherein the second level network data collector receives processed network accounting data from one or more first level network data collectors, processes and stores the network accounting data at the second level network data collector.

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Each first level network data collector includes a first level data storage system and the second level network data collector includes a second level data storage system, for storing processed network accounting data. The first level data storage system and the second level data storage system each include a processed data storage location, a meta data storage location and an error recovery information storage location. The processed network accounting data is stored at the processed data storage location. After storing of the process network accounting data, corresponding meta data is transferred to the meta data storage location and error recovery information is transferred to the error recovery information location. Each first level network data collector includes a query manager. The second level network data collector is in communication with the first level network data collector via the query manager. Each of the first level data storage systems includes a first level aging policy, wherein network accounting data is removed from the first level data storage system after a time period corresponding to the first level aging policy. The second level data storage system includes a second level aging policy different from the first level aging policy, wherein the network accounting data is removed from the second level data storage system after a time period corresponding to the second level aging policy.

**Schweitzer** is as discussed above in Section I.

**Carroll** is as discussed above in Section I.

As conceded by the Examiner, Schweitzer fails to disclose a network usage system wherein **the first level data storage system and the second level data storage system each include a processed data storage location, a meta data storage location and an error recovery information storage location, wherein the processed network accounting data is stored at the processed data storage location. The processed network accounting data is stored at the processed data storage location. After storing of the process network accounting data, corresponding meta data is transferred to the meta data storage location and error recovery information is transferred to the error recovery information location.** See also, Office Action mailed August 12, 2005.

**Carroll** also fails to disclose a network usage system wherein **the first level data storage system and the second level data storage system each include a processed data storage location, a meta data storage location and an error recovery information storage location, wherein the processed network accounting data is stored at the**



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**processed data storage location. The processed network accounting data is stored at the processed data storage location. After storing of the process network accounting data, corresponding meta data is transferred to the meta data storage location and error recovery information is transferred to the error recovery information location.** In contrast, Carroll merely discloses a flow probe which may be deployed between an end system "A" and an end system "B". The flow probe is used to generate an error report. The flow probe can receive an Internet Message Control Protocol (IMCP) message to convey error information back to an originator of a request, such as a device being in a failed state. See Carroll, col. 13, paragraph 0148. Such a system as disclosed by Carroll is not claimed by Appellants.

Further, both Schweitzer and Carroll fail to disclose **each first level network data collector including a query manager. The second level network data collector is in communication with the first level network data collector via the query manager.**

Furthermore, the Examiner concedes that Schweitzer in view of Carroll fails to disclose wherein **the first level data storage system includes a first level aging policy, wherein network accounting data is removed from the first level data storage system after a time period corresponding to the first level aging policy.** See also, Office Action mailed August 12, 2005.

**Dyer** merely discloses a billing recorder for providing a record of customer usage of electricity that has a controller which may include a microprocessor for receiving and processing pulses from an electric meter. Data from one or more input channels is temporarily stored in random access memory by the controller in data words representative of an energy consumed in predetermined time ("demand") intervals. See Dyer, Abstract. Such a system as disclosed by Dyer is not claimed by Appellants.

**Dyer** also fails to disclose a network usage system wherein **the first level data storage system includes a first level aging policy, wherein network accounting data is removed from the first level data storage system after the time period corresponding to the first level aging policy** as claimed by Appellant.

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In view of the above, one skilled in the art cannot combine the teachings of Schweitzer in view of Carroll and further in view of Dyer and arrive at the invention of independent claim 40.

Dependent claims 41-43 depend upon independent claim 40. Accordingly, Appellants believe these dependent claims also to be allowable over the art of record.

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**CONCLUSION**

In view of the above, Appellants respectfully submit that all pending claims are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of all pending claims is respectfully requested.

Any inquiry regarding this Amendment and Response should be directed to either Phil Lyren at Telephone No. (281) 514-8236, Facsimile No. (281) 514-8332 or Steven E. Dicke at Telephone No. (612) 573-2002, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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**CERTIFICATE UNDER 37 C.F.R. 1.8:**

The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Mail Stop Appeal Brief – Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 27 day of February, 2006.

By Steven E. Dicke  
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**CLAIMS APPENDIX**

1. (Previously Presented) A network usage system having a multiple level distributed data storage system, the system comprising:
  - a set of first level network data collectors, wherein each first level network data collector receives network accounting data from a network data source, processes and stores the network accounting data at the first level network data collector; and
  - a second level network data collector, wherein the second level network data collector receives processed network accounting data from one or more first level network data collectors, processes and stores the network accounting data at the second level network data collector; andwherein each first level network data collector includes a first level data storage system and the second level network data collector includes a second level data storage system, for storing processed network accounting data, wherein the first level data storage system and the second level data storage system each include a processed data storage location, a metadata storage location and an error recovery information storage location, wherein the processed network accounting data is stored at the processed data storage location.
2. (Original) The system of claim 1, further comprising a third level network data collector, wherein the third level network data collector receives processed network accounting data from the first level network data collector or the second level network data collector, processes and stores the network accounting data at the third level network data collector.
3. (Original) The system of claim 2, further comprising an application interface which receives processed network accounting data from the first level network data collector, the second level network data collector, or the third level network data collector.

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4. (Original) The system of claim 1, wherein the first level network data collector includes a query manager, and wherein the second level network data collector is in communication with the first level network data collector via the query manager.
5. (Original) The system of claim 1, wherein the first level network data collector converts the network accounting data to a standard data format.
6. (Cancelled)
7. (Cancelled)
8. (Previously Presented) The system of claim 1, wherein after storing of the processed network accounting data, corresponding metadata is transferred to the metadata storage location and error recovery information is transferred to the error recovery information location.
9. (Previously Presented) The system of claim 1, wherein the first level data storage system includes a first level aging policy, wherein network accounting data is removed from the first level data storage system after a time period corresponding to the first level aging policy.
10. (Original) The system of claim 9, wherein the second level data storage system includes a second level aging policy different from the first level aging policy, wherein the network accounting data is removed from the second level data storage system after a time period corresponding to the second level aging policy.
11. (Withdrawn) A network usage system having a multiple level distributed data storage system, the system comprising:  
a first network data collector including a first encapsulator, a first aggregator, and a first data storage system;

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a second network data collector including a second encapsulator, a second aggregator, and a second data storage system; and

a data correlator collector including a third encapsulator, a third aggregator, and a third data storage system, wherein the third encapsulator is in communication with the first data storage system and the second data storage system.

12. (Withdrawn) The system of claim 11, further comprising an aggregator collector including a fourth encapsulator, a fourth aggregator, and a fourth data storage system, wherein the fourth encapsulator is in communication with the third data storage system.

13. (Withdrawn) The system of claim 11, wherein the first data collector receives network data from a network data source, and wherein the first aggregator processes the network data.

14. (Withdrawn) The system of claim 13, wherein the processing of the network data includes the process of performing data reduction on the network data.

15. (Withdrawn) The system of claim 11, wherein the first data collector receives network data from a network data source, and wherein the first encapsulator converts the network data to a standard data format.

16. (Withdrawn) The system of claim 11, wherein the first aggregator processes the network data providing aggregated data, and wherein the first aggregator includes a defined data transfer interval such that the first aggregator transfers the aggregated data to the first data storage system at the data transfer interval.

17. (Withdrawn) The system of claim 16, wherein the data correlator collector includes a defined query interval, wherein the third encapsulator queries the first data storage system for the aggregated data at the query interval.

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18. (Withdrawn) The system of claim 17, wherein the data transfer interval is a multiple of the query interval.

19. (Withdrawn) The system of claim 11, wherein the first data storage system includes an aggregated data storage location, a metadata storage location and an error recovery information storage location, wherein the aggregated data is stored at the aggregated data storage location.

20. (Withdrawn) The system of claim 19, wherein after transfer of the aggregated data to the first data storage system, corresponding metadata is transferred to the metadata storage location and error recovery information is transferred to the error recovery information location.

21. (Previously Presented) A method for recording network usage including storing network data in a multiple level data storage system, the method comprising the steps of:

- defining a set of first level network data collectors;
- receiving a first set of network accounting data at each first level network data collector, processing and storing the first network accounting data set at the first level network data collector;
- defining a second level network data collector;
- receiving the first network accounting data set from one or more first level network data collectors, processing the first network accounting data set to produce a second network accounting data set, and storing the second network accounting data set at the second level network data collector;
- defining a first level aging policy for the first level network data collector; and
- removing the first network accounting data set from the first level network data collector to the second level network data collector after a time period corresponding to the first level aging policy.

22. (Original) The method of claim 21, further comprising the steps of:

- defining a third level network data collector; and

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receiving the second network accounting data set at the third level network data collector from the second level network data collector, processing the second network accounting data set to produce a third network accounting data set, and storing the third network accounting data set at the third level network data collector.

23. (Original) The method of claim 21, further comprising the step of defining an application interface; and receiving the second network accounting data set at the application interface.

24. (Original) The method of claim 21, further comprising the step of defining the first level network data collector to include a query manager, wherein the second level network data collector is in communication with the first level network data collector via the query manager.

25. (Original) The method of claim 21, wherein the step of processing and storing the first network accounting data set via the first level network data collector further comprises the step of converting the first network accounting data set to a standard data format.

26. (Original) The method of claim 21, further comprising the step of defining the first level network data collector to include a first level data storage system having a first processed data storage location, a metadata storage location and an error recovery information storage location, wherein the first network accounting data set is stored at the first processed data storage location.

27. (Original) The method of claim 26, further comprising the steps of transferring metadata to the metadata storage location and transferring error recovery information to the error recovery information storage location after storing the processed first network accounting data set.

28. (Cancelled)



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29. (Previously Presented). The method of claim 21, further comprising the step of defining a second level aging policy for the second level network data collector, wherein the second level aging policy is different than the first level aging policy.

30. (Withdrawn) A network usage recording system having a multiple level distributed data storage system, the system comprising:

a set of first level network data collectors, wherein each first level network data collector receives network usage information from a network data source, processes and stores the network usage information at the first level network data collector, including converting the network usage information to a standard data format; and

a second level network data collector, wherein the second level network data collector receives processed network usage information converted to the standard data format, from one or more first level network data collectors, processes and stores the network usage information at the second level network data collector.

31. (Withdrawn) The system of claim 30, further comprising a third level network data collector, wherein the third level network data collector receives processed network usage information converted to the standard data format from the first level network data collector or the second level network data collector, processes and stores the network usage information at the third level network data collector.

32. (Withdrawn) The system of claim 30, wherein the network usage information comprises at least one of network usage data or network session data, comprising at least one of a source IP address, a destination IP address, byte counts, packet counts, a time stamp and a username.

33. (Withdrawn) The system of claim 30, wherein each first level network data collector comprises an encapsulator, an aggregator, and a data storage system, and the second level

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data collector is a correlator collector including an encapsulator, an aggregator, and a data storage system.

34. (Withdrawn) The system of claim 33, wherein the first level encapsulator converts the network usage information to a standard data format, and the aggregator processes the converted network usage information including performing data reduction to provide aggregated data.

35. (Withdrawn) The system of claim 34, further comprising a query manager in communication with the first level network data collector and the second level network data collector; and each aggregator includes a data transfer interval such that the aggregator transfers aggregated data to the data storage system at the data transfer interval, the query manager including a query interval where the second level data collector queries the first level data storage system for the aggregated data at the query interval via the query manager.

36. (Previously Presented) A method for recording network usage including storing network data in a multiple level data storage system, the method comprising the steps of:

- defining a set of first level network data collectors;
- receiving a first set of network usage information at each first level network data collector, processing and storing the first network usage information set at the first level network data collector;
- defining a second level network data collector;
- receiving the first network usage information set at the second level network data collector from one or more first level network data collectors, processing the first network usage information set to produce a second network usage information set, and storing the second network usage information set at the second level network data collector; and
- defining the first level network data collector to include a query manager;

wherein the second level network data collector is in communication with the first level network data collector via the query manager.

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37. (Previously Presented) The method of claim 21, where processing the first network usage information set includes converting the first network usage information set to a standard data format, and aggregating the converted first network usage information set.

38. (Previously Presented) The method of claim 21, where receiving the first set of network usage information includes defining the network usage information to comprise at least one of network usage data or network session data.

39. (Previously Presented) The method of claim 21, further comprising querying the first level network data collector for the processed network usage information stored at the first level network data collector; and transferring the processed network usage information to the second level network data collector.

40. (Previously Presented) A network usage system having a multiple level distributed data storage system, the system comprising:

a set of first level network data collectors, wherein each first level network data collector receives network accounting data from a network data source, processes and stores the network accounting data at the first level network data collector, where each network data collector is configured to receive network accounting data including at least one of network usage data comprising source address, destination address, byte or packet counts and a time stamp, or network session data comprising a source address, a time stamp and a user name;

a second level network data collector, wherein the second level network data collector receives processed network accounting data from one or more first level network data collectors, processes and stores the network accounting data at the second level network data collector;

wherein each first level network data collector includes a first level data storage system and the second level network data collector includes a second level data storage system, for storing processed network accounting data, wherein the first level data storage system and the second level data storage system each include a processed data storage location, a meta data storage location and an error recovery information storage location, wherein the processed network accounting data is stored at the process data storage location,

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wherein after storing of the process network accounting data, corresponding meta data is transferred to the meta data storage location and error recovery information is transferred to the error recovery information location;

wherein each first level network data collector includes a query manager, and wherein the second level network data collector is in communication with the first level network data collector via the query manager; and

wherein each of the first level data storage systems include a first level aging policy, wherein network accounting data is removed from the first level data storage system after a time period corresponding to the first level aging policy, and wherein the second level data storage system includes a second level aging policy different from the first level aging policy, wherein the network accounting data is removed from the second level data storage system after a time period corresponding to the second level aging policy.

41. (Previously Presented) The system of claim 40, where each first level network data collector is configured to receive network accounting data from an Internet network data source.

42. (Previously Presented) The system of claim 40, where each first level network data collector is configured to receive network accounting data from an intranet network data source.

43. (Previously Presented) The system of claim 40, where each first level network data collector is configured to receive network accounting data from a telephony network data source.

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**EVIDENCE APPENDIX**

None.

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**RELATED PROCEEDINGS APPENDIX**

None.